

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM
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B150 Sandhill Crane *Grus canadensis*
Family: Gruidae Order: Gruiformes Class: Aves

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Both greater (*G. c. tabida*) and lesser (*G. c. canadensis*) sandhill cranes occur in California. Historically, *G. c. tabida* was a fairly common breeder on northeastern plateau (Grinnell and Miller 1944). Now reduced greatly in numbers, and breeds only in Siskiyou, Modoc and Lassen cos. and in Sierra Valley, Plumas and Sierra cos. (James 1977, Remsen 1978, McCaskie et al. 1979). In summer, this race occurs in and near wet meadow, shallow lacustrine, and fresh emergent wetland habitats. It winters primarily in the Sacramento and San Joaquin valleys from Tehama Co. south to Kings Co. (Grinnell and Miller 1944), where it frequents annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands. It prefers relatively treeless plains. The migratory, nonbreeding subspecies *G. c. canadensis* winters in similar habitats in the San Joaquin and Imperial valleys (Grinnell and Miller 1944), and to a lesser extent in the Sacramento Valley. In southern California, concentrates on the Carrizo Plain, San Luis Obispo Co., with smaller flocks near Brawley, Imperial Co., and Blythe, Riverside Co. (Garrett and Dunn 1981). The latter 2 flocks may be partly, or largely, *G. c. tabida*, which formerly wintered more commonly in southern California, but which has declined greatly there and throughout its range. Outside of known wintering grounds, extremely rare except that migrates over much of interior California. A few coastal sightings from Marin Co. southward, but no records from offshore islands.

SPECIFIC HABITAT REQUIREMENTS

Feeding: When foraging, prefers open shortgrass plains, grain fields, and open wetlands (Grinnell and Miller 1944). Moist sites commonly used, but also feeds on dry plains far from water. Feeds on grasses, forbs, especially cereal crops (newly planted or harvested); also uses long bill to probe in soil for roots, tubers, seeds, grains, earthworms, and insects. Larger prey, such as mice, small birds, snakes, frogs, and crayfish also are taken. These are ripped into small pieces before being consumed (Terres 1980). Fruits and berries are eaten if available (Eckert and Karalus 1981).

Cover: Roosts at night in flocks standing in moist fields or in shallow water (Terres 1980). Also roosts in expansive, dry grasslands, island sites, and wide sandbars (Johnsgard 1975a, Eckert and Karalus 1981).

Reproduction: Nests in remote portions of extensive wetlands (Cogswell 1977), or sometimes in shortgrass prairies (Eckert and Karalus 1981). On dry sites, nests are scooped-out depressions lined with grasses. More commonly, nests are large mounds of wetland plants, in shallow water. Natural hummocks or muskrat houses often used. Ideal sites are on small islands screened by tall tules, cattails, or shrubs (Harrison 1978).

Water: Avoids saline waters. Requires fresh water for drinking and bathing (Marcot

1979).

Pattern: When nesting, prefers open habitats with shallow lakes and fresh emergent wetlands. In winter, also inhabits dry grasslands and croplands especially near wetlands (Grinnell and Miller 1944). Prefers treeless habitats where predators can be seen (Cogswell 1977).

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity. Roosts at night and flies to feeding areas in flocks (Terres 1980). Migrates by night and day (Eckert and Karalus 1981).

Seasonal Movements/Migration: Breeding population from north of California passes southward through the state in September and October and northward in March and April, and many individuals spend the winter. Travels in great flocks. Migration is rapid and direct; flies both night and day and stops only for short periods to feed and rest. California breeding population winters chiefly in the Central Valley.

Home Range: In Florida, Nesbitt (1976) recorded 3 home ranges 1 June to 1 August, averaging 460 ha (1137 ac); individuals moved an average of 8.5 km (5.3 mi) per day within home range. Migrants sometimes range as far as 8 km (5 mi) daily from roost to feed (Walkinshaw 1973).

Territory: Established pair may defend the same territory in successive years, and may use the same nest site (Johnsgard 1975a). At Malheur Refuge in Oregon, Littefield and Ryder (1968) recorded 8 territories averaging 25 ha (62 ac) and ranging from 1.2 to 68 ha (3-168 ac). In Idaho, Drewien (1974) recorded the average size of 5 territories as 17 ha (42 ac). Walkinshaw (1973) summarized data on 171 territories in 4 states and reported averages in different regions of 16, 42, 53, 65, and 85 ha (40, 103, 132, 161, and 210 ac), with a range of 3.2 to 194 ha (8-480 ac).

Reproduction: Courtship begins in April with elaborate dancing behaviors that often include 50-80 individuals (Eckert and Karalus 1981). Peak breeding May until July, and nesting completed by late August. Monogamous, and may remain paired for life (Johnsgard 1975a). Solitary nester; average clutch size 2, range 1-3 (Harrison 1978). Single-brooded, with an incubation period of about 30 days (Johnsgard 1975a). Young precocial, and parents often separate chicks. If chicks are raised together, antagonism between them may reduce reproductive success to 1 chick per yr (Johnsgard 1975a). Young fly at about 70 days, but remain with adults up to a year (Harrison 1978). Does not breed until 4th yr (Johnsgard 1975a).

Niche: Eats mostly waste cereal; also many insects and rodents (Eckert and Karalus 1981). Particularly sensitive to human disturbance when nesting, especially within a mile of the nest-site. Grazing is detrimental (Marcot 1979).

REFERENCES

- California Department of Fish and Game. 1983. At the crossroads: A report on the status of California's endangered and rare fish and wildlife. Addenda to the 5th biennial rep. of 1980. Sacramento. 20pp.
- Cogswell, H. L. 1977. Water birds of California. Univ. California Press, Berkeley. 399pp.
- Dawson, W. L. 1923. The birds of California. 4 Vols. South Moulton Co., San Diego. 2121pp.
- Drewien, R. C. 1974. Ecology of rocky Mountain greater sandhill cranes. Ph.D. Thesis, Univ. Idaho, Moscow. 168pp.
- Eckert, A. W., and K. E. Karalus. 1981. The wading birds of North America. Doubleday and Co., Garden City, NY. 252pp.

- Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.
- Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pac. Coast Avifauna No. 27. 608pp.
- Harrison, C. 1978. A field guide to the nests, eggs and nestlings of North American birds. W. Collins Sons and Co., Cleveland, OH. 416pp.
- Harrison, C. J. O., ed. 1978. Bird families of the world. Harry N. Abrams, Inc., New York. 264pp.
- James, A. H. 1977. Sandhill cranes breeding in Sierra Valley, California. West Birds 8:159-160.
- Johnsgard, P. A. 1975a. North American game birds of upland and shoreline. Univ. Nebraska Press, Lincoln. 183pp.
- Littlefield, C. D., and R. A. Ryner 1968. Breeding biology of the greater sandhill crane on Malheur National Wildlife Refuge, Oregon. Trans. North Am. Wildl. and Nat. Resour. Conf. 33:444-454.
- Marcot, B. G., ed. 1979. California wildlife/habitat relationships program: North Coast/Cascades Zone. Vol. II. Bird narratives. U.S. Dep. Agric., For. Serv., Six Rivers Nat. For., Eureka. 573pp.
- McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. 84pp.
- Nesbitt, S. A. 1976. Use of radio telemetry techniques on Florida sandhill cranes. Proceed. Inter. Crane Workshop 1:299-303.
- Remsen, J. V., Jr. 1978. Bird species of special concern in California. Calif. Dept. of Fish and Game, Sacramento. Wildl. Manage. Admin. Rep. No. 78-1. 54pp.
- Terres, J. K. 1980. The Audubon Society encyclopedia of North American birds. A. Knopf, New York. 1100pp.
- Walkinshaw, L. H. 1973. Cranes of the world. Winchester Press, NY. 370pp.